

PO-7931

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WHAT IS CLAIMED IS:

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1. A geotextile/polyurethane composite comprising:  
 one or more geotextiles substantially impregnated with a one-component heterogeneous liquid polyurethane composition comprising,  
 5 i) an isocyanate groups containing solid dispersed in a liquid isocyanate reactive compound,  
 or  
 ii) a solid isocyanate reactive compound dispersed in a liquid isocyanate, isocyanate adduct, or isocyanate terminated prepolymer,  
 10 optionally catalysts, viscosity adjusting additives, solvents, surfactants, crosslinking agents, pigments, fillers, and other additives.
- 15 2. A liner (for irrigation canals and ditches) comprising the geotextile/polyurethane composite according to Claim 1.
- 20 3. The geotextile/polyurethane composite according to Claim 1 having an elongation of at least about 5 % and a tensile strength of at least about 200 psi.
- 25 4. The geotextile/polyurethane composite according to Claim 1, wherein the water absorption is less than about 10 % by weight.
5. The geotextile/polyurethane composite according to Claim 1, wherein the one or more geotextiles includes at least one thicker, more sponge-like geotextile. *Thicker than what?*
- 30 6. The geotextile/polyurethane composite according to Claim 1 wherein the one or more geotextiles are substantially impregnated with the one-component heterogeneous liquid polyurethane composition such that

*abstract ✓*

the amount of polymer present in the composite ranges from about 0.2 kg to about 20 kg of polymer per square meter of geotextile.

7. The geotextile/polyurethane composite according to Claim 1,  
5 wherein the one or more geotextiles are impregnated with the one-  
component heterogeneous liquid polyurethane composition such that the  
amount of polymer present in the composite ranges from about 0.5 kg to  
about 5 kg of polymer per square meter of geotextile.
- 10 8. The geotextile/polyurethane composite according to Claim 1  
having a thickness of from about 40 microns to about 500 microns.
9. A process of forming a geotextile/polyurethane composite  
comprising the steps of:  
15 impregnating one or more geotextiles substantially with a one component  
heterogeneous liquid polyurethane composition comprising,  
i) an isocyanate groups containing solid dispersed in a liquid  
isocyanate reactive compound,  
or  
20 ii) a solid isocyanate reactive compound dispersed in a liquid  
isocyanate, isocyanate adduct, or isocyanate terminated  
prepolymer,  
optionally catalysts, viscosity adjusting additives, solvents,  
surfactants, crosslinking agents, pigments, fillers, and other  
25 additives;  
conforming the one or more heterogeneous liquid polyurethane  
impregnated geotextiles to a surface; and  
applying heat or a solvent to the heterogeneous liquid polyurethane  
impregnated geotextile to form a geotextile reinforced  
30 polyurethane/polyurea composite.

10. The process according to Claim 9, wherein the composite is  
a liner for irrigation canals and/or ditches.

11. The process according to Claim 9, wherein the composite  
5 has an elongation of at least about 5 % and a tensile strength of at least  
about 200 psi.

12. The process according to Claim 9, wherein the one or more  
geotextiles includes at least one thicker, more sponge-like geotextile.

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13. The process according to Claim 9, wherein the one or more  
geotextiles are impregnated with the one-component heterogeneous liquid  
polyurethane composition such that the amount of polymer present in the  
composite ranges from about 1 kg to about 20 kg of polymer per square  
15 meter of geotextile.

14. The process according to Claim 9, wherein the one or more  
geotextiles are impregnated with the one-component heterogeneous liquid  
polyurethane composition that the amount of polymer present in the  
composite ranges from about 2 kg to about 5 kg of polymer per square  
20 meter of geotextile.

15. The process according to Claim 9, wherein the composite  
has a thickness of from about 40 microns to about 500 microns.

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16. In a process of lining canals and ditches, the improvement  
comprising including the composite according to Claim 1.

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17. In a process of lining canals and ditches, the improvement  
comprising including the composite made by the process according to  
Claim 9.